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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,691	05/08/2005	Jill Van Winkle	7896-72613-04	3095
<div>57622      7590      11/14/2007 KLARQUIST SPARKMAN, LLP 121 S.W. SALMON STREET SUITE 1600 PORTLAND, OR 97204</div>				
			EXAMINER KUMAR, VINOD	
			ART UNIT 1638	PAPER NUMBER
			MAIL DATE 11/14/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/509,691

Applicant(s)

VAN WINKLE ET AL.

Examiner

Vinod Kumar

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3, 5-8, 10, 16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 5-8, 10, 16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Status of objections and rejections***

1. Office acknowledges the receipt of Applicant's response filed on September 4, 2007. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. Claims 1, 3, 5-8, 10, and newly added claim 16 are pending. Claims 1, 3, 5-8, 10, and newly added claims 16 are examined on merits in the instant Office action. All previous claim objections not set forth below are withdrawn in light of claim amendment filed in the paper of September 4, 2007. This action is made FINAL.

### ***Election/Restriction***

2. Applicants are reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Claim Rejections - 35 USC § 102***

3. Claims 1, 5-8, 10 remain and newly added claim 16 is rejected under 35 U.S.C. 102(b) as being anticipated by Alexandrov et al. (EP1033405, Published June 9, 2000) taken with the evidence of Winkle et al. (US Patent Publication No. US 2005/0257294

A1) for the reasons of record stated in the Office action mailed on May 1, 2007.

Applicants traverse the rejection in the paper filed on September 4, 2007.

Applicants argue that Alexandrov et al. do not teach a transgenic plant comprising a plant transformation vector comprising a heterologous constitutive promoter that provides overexpression of a DRO2 transcript in which said transgenic plant has increased drought tolerance compared to a non-transgenic control plant (response, page 5, lines 12-21). Applicants further argue that Alexandrov et al. do not disclose each and every step of the instantly claimed method of increasing drought tolerance in a plant by use of a nucleotide sequence that encodes a DRO2 polypeptide comprising an amino acid sequence having at least 95% sequence identity to the amino acid sequence of SEQ ID NO: 2 (response, page 6, lines 9-17). Applicants further argue that a new use of a known sequence is patentable subject matter. Applicants further argue that Office cannot use present disclosure to establish inherency for at least the method claims (response, page 6, lines 18-25).

Applicant's arguments were fully considered but were not found to be persuasive. It is maintained that pages 341; 343; claims 1, 25, 29-34; page 326, paragraph 2279; page 327; page 329, paragraphs 2301-2308 of the reference clearly disclose a method of making a transgenic plant comprising introducing and expressing a polynucleotide sequence encoding SEQ ID NO: 33003 which has 100% sequence identity to instant SEQ ID NO: 2. Furthermore, as SEQ ID NO: 33003 of the reference anticipates instant SEQ ID NO: 2, it would inherently comprise Dof-type zinc finger domain. It is further maintained that the property of drought tolerance or increased water content is inherent

to the method of making a transgenic plant comprising expression of SEQ ID NO: 33003 disclosed in the reference. In response to new limitation "heterologous constitutive promoter" Applicant's attention is specifically drawn to page 327 (paragraph 2282) and page 342 (claim 11) of Alexandrov et al., wherein said limitation is very clearly disclosed. As discussed in previous Office actions, it may be reemphasized that Alexandrov et al. anticipates each and every structural element of instantly claimed product.

Applicants are also reminded that something which is old does not become patentable upon the discovery of a new property. The discovery of a previously unappreciated property of a prior art composition, or of a scientific explanation for the prior art's functioning, does not render the old composition patentably new to the discoverer. See *Atlas Powder Co. v. Ireco Inc.*, 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999). Thus the claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. See also *In re Best*, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977). See also MPEP § 2112.01.

Furthermore, in the instant case, Applicants own admission (US Patent Publication No. US 2005/0257294 A1) provides additional evidence about the drought tolerance property of SEQ ID NO: 2 which has 100% sequence identity to Alexandrov et al. polypeptide. Furthermore, increased water content in the transgenic plant of Alexandrov et al. would also be inherent to the polypeptide disclosed in the reference.

The limitation “ T-DNA inserts into a genome of the transgenic plant and the enhancer element provides up regulation of genes within about 10 kilo bases of the T-DNA” in newly added claim 16, is an inherent property of any T-DNA comprising an enhancer and a DNA construct of interest. This inherent feature of T-DNA is also evidenced in US Patent Publication No. US 2005/0257294 A1, wherein Applicant admits said inherent property of any T-DNA comprising a enhancer. See paragraph 0029 of US Patent Publication No. US 2005/0257294 A1, wherein the Winkle et al. says “When the T-DNA inserts into the genome of transformed plants, the enhancer element can cause up-regulation genes in the vicinity, generally within about 10 kilo base (kb) of the insertion”.

Further, it is maintained that Alexandrov et al. active method steps of making a transgenic plant using a polynucleotide sequence encoding SEQ ID NO: 33003 are identical to the instant method steps of instantly claimed method of making a transgenic plant using SEQ ID NO: 1. If the body of a claim fully and intrinsically sets forth all of the limitations of the claimed invention, rather than any distinct definition of any of the claimed invention's limitations, then preamble is not considered a limitation and is of no significance to claim construction. See MPEP 2111.02. Also see *In re Cruciferous Sprout Litig.*, 301 F.3d 1343,1346-48, 64 USPQ2d 1202, 1204-05 (Fed. Cir. 2002) where a claim at issue was directed to a method of preparing a food rich in glucosinolates wherein cruciferous sprouts are harvested prior to the 2-leaf stage. The court held that the preamble phrase “rich in glucosinolates” helps define the claimed

invention, as evidenced by the specification and prosecution history, and thus is a limitation of the claim (although the claim was anticipated by prior art that produced sprouts inherently "rich in glucosinolates"). Furthermore, see *Integra LifeSciences I Ltd. V. Merck KGaA* 50 USPQ2d 1846, 1850 (DC Scalif 1999), which teaches that where the prior art teaches all of the required steps to practice the claimed method and no additional manipulation is required to produce the claimed result, then prior art anticipates the claimed invention.

Accordingly, Alexandrov et al. anticipated the claimed invention.

4. Claims 1, 5-8, 10 remain and newly added claim 16 is rejected under 35 U.S.C. 102(e) as being anticipated by Harper et al. (US Patent Publication No. 20020160378, filed August 24, 2001) taken with the evidence of Winkle et al. (US Patent Publication No. US 2005/0257294 A1) for the reasons of record stated in the Office action mailed on May 1, 2007. Applicants traverse the rejection in the paper filed on September 4, 2007.

Applicants argue that transcriptional profiling studies of Harper et al. indicate that levels of transcripts with a polynucleotide sequence of SEQ ID NO: 1986 were not increased in plants treated with mannitol, and thus SEQ ID NO: 1986 was not observed to be responsive to drought-like stresses. Applicants further argue that since SEQ ID NO: 1986 was non-responsive to stress, a transgenic plant with SEQ ID NO: 1986 without a vector construct that causes overexpression of such transcript does not result in a drought tolerant transgenic plant as instantly claimed (response, page 7, lines 11-

27). Applicants further argue that Harper et al. do not disclose the vector construct that would cause overexpression of DOR2 transcript in a transgenic plant. Applicants further argue that Harper et al. do not disclose any method of increasing drought tolerance in a plant by use of a nucleotide sequence that encodes a DOR2 polypeptide comprising an amino acid sequence having at least 95% sequence identity to instant SEQ ID NO: 2. Applicants further establish that Office has failed to establish inherent property of SEQ ID NO: 1986 (response, page 8, lines 1-22).

Applicant's arguments were fully considered but were not found to be persuasive. It is maintained that Harper et al. disclose a method of producing a transgenic plant comprising a polynucleotide sequence encoding a polypeptide of SEQ ID NO: 1986 which has 100% sequence identity to instant SEQ ID NO: 2. The reference also discloses transforming a plant cell with an expression vector comprising said polynucleotide sequence operably linked to a promoter, obtaining transgenic plant and seed from the plant cell that expresses said polypeptide, or wherein said promoter is constitutive. See in particular, abstract; paragraphs 0016-0017, 0031-0033, 0039, 0041, 0057-0060, 0079-0080, 0093-0106, 0113-0123, 0145-0153, 0158-0177. Also see Table 1 (cites GenBank Sequence accession No. GI:3790583 for Dof-type zinc finger domain), and paragraph 0054 which clearly discloses abiotic stress (including drought) tolerant properties of the nucleotide sequence(s) disclosed in the reference.

It may be emphasized that the property of drought tolerance or increased water content are also inherent to the method comprising expressing a polynucleotide sequence encoding the polypeptide of SEQ ID NO: 1986 disclosed in the reference. It



is further maintained that instant claims are directed to expression of a nucleotide sequence encoding SEQ ID NO: 2 in a transgenic environment. This implies that the nucleotide sequence encoding instant SEQ ID NO: 2 is not subjected to similar transcriptional regulation as one would expect from its native counterpart present within the plant genome. While the endogenous SEQ ID NO: 2 is expressed under a stress (drought) inducible promoter, the transgenic SEQ ID NO: 2 could be constitutively expressed. It is further maintained that Harper et al. data presented in tables 3-5, 7-9, 11-13, 15-17, 21-23 and 24-26 is based on endogenous expression of stress-related polynucleotides which are regulated by their native stress-responsive promoter(s). This data does not provide evidence against the drought tolerant property of the product (SEQ ID NO: 1986), which the latter inherently possesses as discussed in detail in last Office action and further outlined above.

The limitation "T-DNA inserts into a genome of the transgenic plant and the enhancer element provides up regulation of genes within about 10 kilo bases of the T-DNA" in newly added claim 16, is an inherent property of any T-DNA comprising an enhancer and a DNA construct of interest. This inherent feature of T-DNA is again evidenced in US Patent Publication No. US 2005/0257294 A1, wherein Applicant admits said inherent property of any T-DNA comprising a enhancer. See paragraph 0029 of US Patent Publication No. US 2005/0257294 A1, wherein the Winkle et al. says "When the T-DNA inserts into the genome of transformed plants, the enhancer element can cause up-regulation genes in the vicinity, generally within about 10 kilo base (kb) of the insertion".

Applicants are also reminded that when the reference relied on expressly anticipates all of the elements of the claimed invention, the reference is presumed to be operable or enabling. See *In re Sasse*, 629 F.2d 675, 207 USPQ 107 (CCPA 1980). See also MPEP § 716.07. If the body of a claim fully and intrinsically sets forth all of the limitations of the claimed invention, rather than any distinct definition of any of the claimed invention's limitations, then preamble is not considered a limitation and is of no significance to claim construction. See MPEP 2111.02. Also see *In re Cruciferous Sprout Litig.*, 301 F.3d 1343, 1346-48, 64 USPQ2d 1202, 1204-05 (Fed. Cir. 2002) where a claim at issue was directed to a method of preparing a food rich in glucosinolates wherein cruciferous sprouts are harvested prior to the 2-leaf stage. The court held that the preamble phrase "rich in glucosinolates" helps define the claimed invention, as evidenced by the specification and prosecution history, and thus is a limitation of the claim (although the claim was anticipated by prior art that produced sprouts inherently "rich in glucosinolates"). Furthermore, see *Integra LifeSciences I Ltd. V. Merck KGaA* 50 USPQ2d 1846, 1850 (DC Scalif 1999), which teaches that where the prior art teaches all of the required steps to practice the claimed method and no additional manipulation is required to produce the claimed result, then prior art anticipates the claimed invention.

Accordingly, Harper et al. anticipated the claimed invention.

### **Conclusions**

5. Claims 1, 3, 5-8, 10 remain and newly added claim 16 is rejected.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is set to expire within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vinod Kumar whose telephone number is (571) 272-5444. The examiner can normally be reached on 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571) 272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

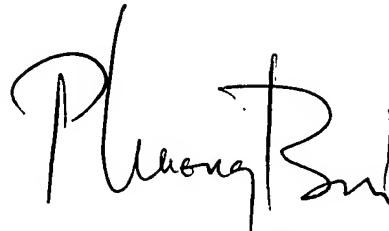
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Phuong T. Bui'. The signature is stylized with a large initial 'P' and a long horizontal stroke.

PHUONG T. BUI  
PRIMARY EXAMINER